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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/628,848      | 07/31/2000  | Grant E. Moulton     | M-8415 US           | 5513             |

24251 7590 04/12/2002

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EXAMINER

DUVERNE, JEAN F

ART UNIT PAPER NUMBER

2839

DATE MAILED: 04/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/628,848

Applicant(s)

Moulton

Examiner

Jean Duverne

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 11, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2839

## DETAILED ACTION

1. In view of applicant's argument, the examiner has decided to issue a second non-final office action.

### *Claim Rejections - 35 USC 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawashima (UK patent 2,308,895).

For claims 1-2 and 22, Kawashima's device discloses an optical switching device comprising a printed circuit board (24), a plurality of optical components ( wave guide (12), wave guide substrate (14), fiber pigtails (15), plurality of electrical component such as transistor (18), resistors (19, 20), a heatsink (30) for dissipating heat, attached to the printed board wherein the heatsink interface with the electrical and optical components; the holders 42 are used as tray for routing the optical fiber.

For claims 3 and 23, Kawashima's device discloses the aforementioned limitations including the opening at 25 in which one or more electrical or optical component are embedded (see fig. 11).

Art Unit: 2839

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (UK patent 2,308,895) in view of Bechtel et al (US patent 5,182,632).

For claims 4 and 24 Kawashima's device discloses the aforementioned limitations, but fails to explicitly disclose the heatsink with an opening to embed electrical or electronic component. Bechtel's device discloses the heatsink 104) with an opening to embed electrical or electronic components

For claims 5 and 25-26 Kawashima's and Bechtel's devices disclose the aforementioned limitations including a portion of the perimeter of the opening interfaces an electrical component (110A, 110B 110C, 110D).

For claims 6 and 27, Kawashima's and Bechtel's devices disclose the aforementioned limitations including ceramic (see Kawashima's device) which is considered as additional heat compliant conductive material at 24 placed on top of the heat sink an the resistor (19, 20).

Art Unit: 2839

For claims 7 and 28 Kawashima's and Bechtel's devices disclose the aforementioned limitations but fail to explicitly disclose the removal of material at the bottom of the heatsink to decrease the size. It would have been obvious to one having ordinary skill in the art at the time the invention was made to remove material at the bottom of the heatsink to decrease the size, since such a modification would have involved a change a mere change in the size of a component. A change in size generally recognize to within the general skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

For claims 8-9 and 29-30, Kawashima's and Bechtel's devices disclose the aforementioned limitations but fail to explicitly disclose different location for each component. It would have been obvious to one having ordinary skill in the art at the invention was made to arrange the optical and electrical components at a certain position on the circuit board, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

For claims 10-21, Kawashima's and Bechtel's devices disclose the aforementioned limitations but fail to explicitly disclose the size of different component in term of height. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make some components higher than other, since such a modification would have involved a change a mere change in the size of a component. A change in size generally recognize to within the general skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). The method is considered as an inherent limitation because the apparatus claims mentioned the features recited in the method claims.

Art Unit: 2839

For claims 31-39, Kawashima's and Bechtel's devices disclose the aforementioned limitations including the optical components operable to receive digital data signal which inherent feature in fiber optic communications (see pages 1-2).

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Duverne whose telephone number is (703) 305 - 0297 . The examiner can normally be reached from 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus, can be reached on (703) 308 - 3119. The fax phone number for this Group is (703) 308 - 7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

JFD



Jean F. Duverne

April 8, 2002

Patent Examiner, Art Unit 2839